

GPR Manual: Downloading and Generating Images

Updated by Julie Leiva 5/13/15

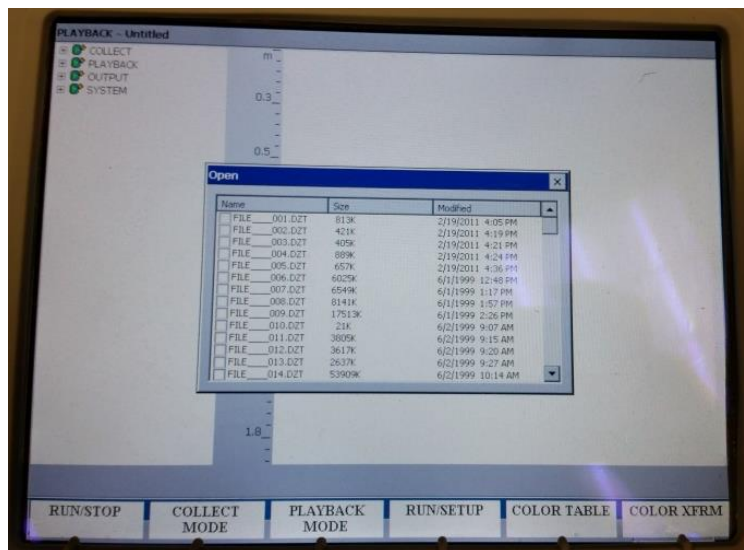
Equipment Needed: USB Flash Drive, Computer

Downloading Data

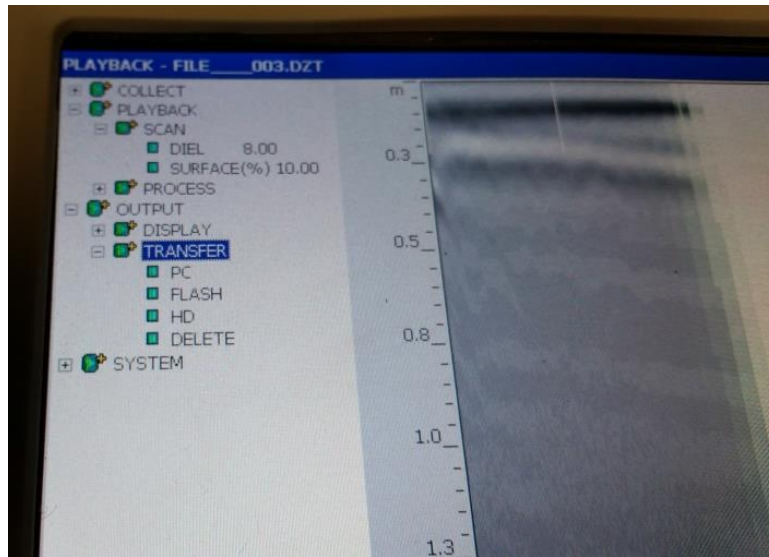
1. Start up the GPR unit. Once the main selection screen appears, click the first button on the left hand side that reads *TerraSIRch*.



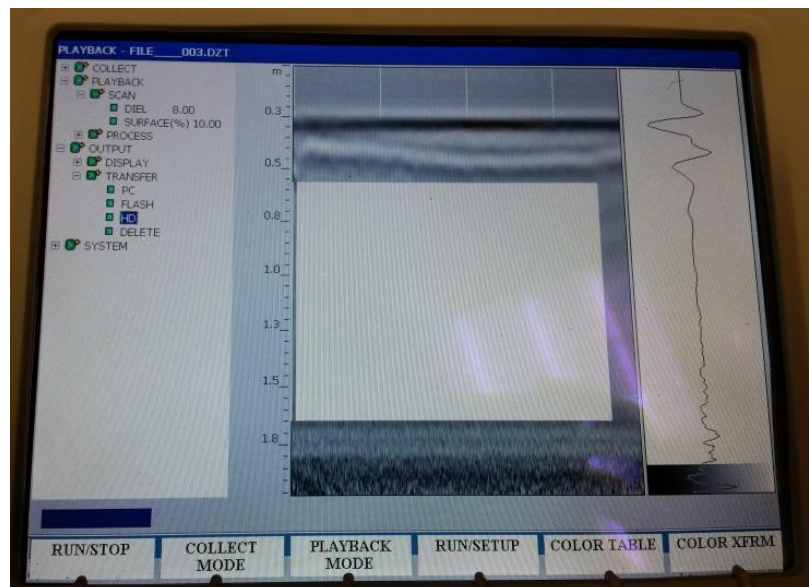
2. This will take you to the playback screen with an open window and a list of files. At this point you can insert your flash drive in the back of the unit. Select any file to open, it doesn't matter which file you choose. (To make selections, hit the center button and then hit the right arrow).



3. The software will begin to cycle through the data within the file you chose. Ignore this and instead use the down arrow to select *Output* and then *Transfer*.



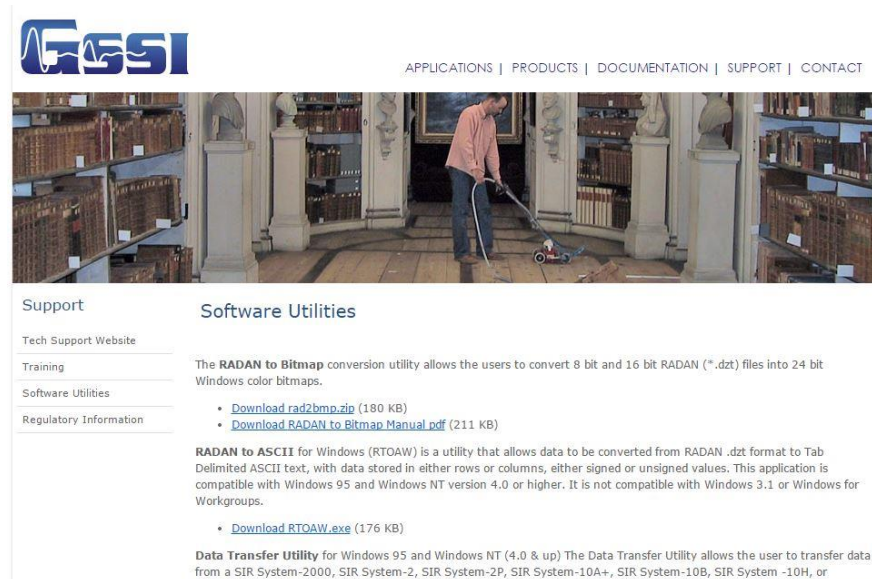
4. Select HD for flash drive transfer. (**NOTE:** HD refers to USB 2.0 or 3.0 hard drives or thumb drives. Flash refers to CompactFlash memory cards.)
5. A new window will open asking you to "Select Files to Copy." Select which files you would like to transfer by using the center key. Once finished, press the right arrow. At the bottom, will see a blue bar indicating the completion of the transfer. Once the bar is finished, you can remove your flash drive and power down the machine. Files will be saved to a folder titled COMMON.PRJ.



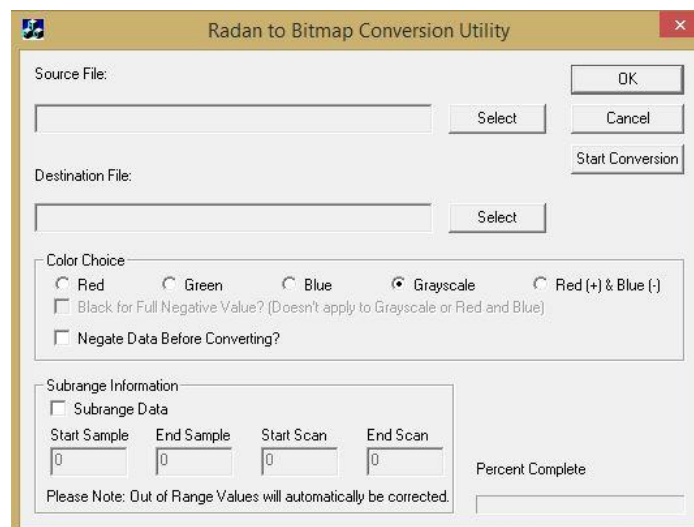
Converting the Data

Once you are finished transferring the data, it is time to convert them from .dzt files, an unconventional format, to bitmap images that can be viewed on any computer. A converter must be downloaded to do so. The link to a convert is <http://www.geophysical.com/softwareutilities.htm>.

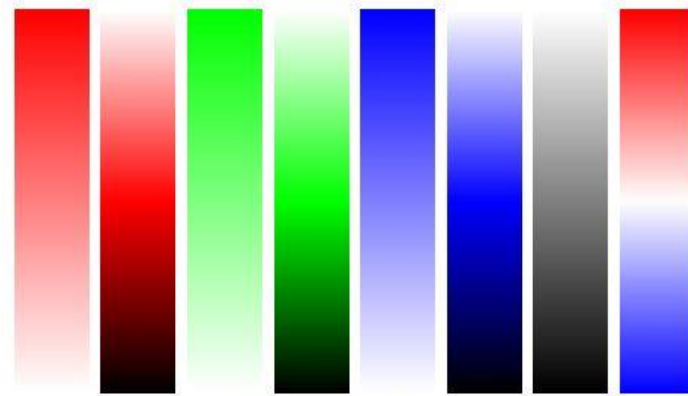
1. After accessing the link above, click the zip file to download the **Radan to Bitmap** conversion utility. (No formal install process is required for this converter; simply copy the rad2bmp.exe to the desired directory, and then create a shortcut to the application on the desktop, if desired.)



2. Double click rad2bmp.exe to open up the main window.
3. After uploading the files onto the computer using the USB flash drive, use the main menu to select the desired source and destination files.



4. Select a desired color scheme. Grayscale is selected by default. The user is recommended to select the Red and Blue color scale which will highlight even minor changes.



5. Subrange information is not required to be filled out. Subranging allows the user to select a specific section of a file, allowing only the data of interest to be processed, as opposed to the entire file.
6. When all options have been set to the desired values, press the *Start Conversion* to start the conversion from a Radan file to a Bitmap file. The file is saved as a 24-bit color Windows bitmap. Note that the user must exit the program (click either *OK* or *Cancel*) before viewing the converted image.
7. Repeat the above steps for the remaining files.

Processing the Data

Data collected from the GPR units can be processed using RADAN software, which accepts both .dzt and .bmp file types. Processing methods will vary depending on the user's preferences and the type of dataset involved. Interested users should refer to the RADAN software User's Guide stored with the software CD. A basic outline for processing the data is as follows:

1. Open a data file.
2. View and edit the file header as necessary.
3. Choose View > Display Options.
4. View and edit the data.
5. Process the data.
6. Save the data.

Note that the RADAN software can only be installed a total of five times and requires the use of a USB key which is kept with the software CD.

